



# Compton USD Learning Packet #7

**Eighth Grade**

Name \_\_\_\_\_

# 8th Grade Learning Packet

## TABLE OF CONTENTS

### Week 8

Day	Lesson	Date Completed
<b>1</b>	1) ELA- Language Spiral #1-5	
	2) Go Math-2.4 Reteach Operations with Scientific Notation	
	3) Science, Read pp. 155, "What is the Role of Plants in Ecosystems?"	
	4) ELD - Vocabulary Development (DECISION)	
<b>2</b>	1) Language Spiral - #6-11	
	2) Go Math -2.4 Practice and Problem Solving: D	
	3) Science - Define on paper: <i>ecosystem and producers</i>	
<b>3</b>	1) Language Spiral - #12-14	
	2) Go Math-2.4 Practice and Problem Solving: A/B	
	3) Science - Define on paper, <i>consumers and decomposers</i>	
	4) ELD - Write About an Experience-Pre-Writing	
<b>4</b>	1) Language Spiral - #15-18	
	1) Go Math-2.4 Practice and Problem Solving: C	
	2) Science - Read pp. 156 and Define on paper, <i>food chain, photosynthesis, and chlorophyll</i>	
<b>5</b>	1) VAPA: Famous Art Recreation	
	2) Go Math- 2.4 Reading Strategies: Follow a Flowchart	
	3) Science - Answer question on paper, "Why are plants important sources of energy for an ecosystem?"	
	4) ELD -Complete Write About an Experience Writing Prompt	

Function of  
Verbals

1. Which is the correct way to write the underlined portion of the sentence?

Each of the players on the girls' volleyball team enjoys playing with their friends and their teammates.

- A. playing with her friends and her teammates.
- B. playing with her friends and their teammates.
- C. playing with their friends and her teammates.
- D. playing with their friends and teammates.

L.8.1.A

Verbs

2. Which sentence is written using the active voice?

- A. Ridden by Kathleen yesterday, the horse had been ridden for the first time.
- B. Yesterday, the horse was ridden by Kathleen for the first time.
- C. The horse was ridden by Kathleen for the first time yesterday.
- D. Yesterday, Kathleen rode the horse for the first time.

L.8.1.B

3. The sentence below contains an error in grammar usage. Read the sentence and the question that follows.

The teacher recommended that each student takes a note.

Which version of the sentence has been correctly edited for grammar usage?

- A. The teacher recommend that the students takes a note.
- B. The teacher recommended that each student take a note.
- C. The teacher recommended that the students takes a note.
- D. The teacher recommended that each student takes notes.

L.8.1.C

Verbs

**4. Read the following paragraph.**

As he left the game store with the newly released video game he had been anticipating for months, James was exhilarated to get home. He made sure nothing stopped him while he was rushing home. He ran upstairs after he frantically entered the house. He stumbled over his brother's skateboard that was recklessly placed on the stairs, but made sure the video game was safe. After entering his room, he immediately approached his video game system. When James turned it on, he entered the video game and an ear-splitting noise was heard. His heart sank because he knew something was wrong with his video game system.

Choose the correct way to edit the verb voice error in the underlined sentence.

- A. James turned it on, he entered the video game and an ear-splitting noise was heard.
- B. An ear-splitting noise was heard when James turned it on, he entered the video game.
- C. When James turned it on, he entered the video game and an ear-splitting noise he heard.
- D. When James turned it on, he entered the video game and he heard an ear-splitting noise.

**L.8.1.D****5. Which is the correct way to write the following sentence?**

I put my binder, a ruler, two felt pens, and a dictionary into my new, backpack.

- A. I put: my binder, a ruler, two felt pens, and a dictionary into my new backpack.
- B. I put my binder; a ruler; two felt pens, and a dictionary into my new, backpack.
- C. I put my binder, a ruler, two felt pens, and a dictionary into my new backpack.
- D. Correct as is

**L.8.2.A**

## LESSON

2-4

**Operations with Scientific Notation****Reteach**

To add or subtract numbers written in scientific notation:

Check that the exponents of powers of 10 are the same.

If not, adjust the decimal numbers and the exponents.

Add or subtract the decimal numbers.

Write the sum or difference and the common power of 10 in scientific notation format.

Check whether the answer is in scientific notation.

If it is not, adjust the decimal and the exponent.

$$\begin{aligned} (a \times 10^n) + (b \times 10^n) &= (a + b) \times 10^n & (1.2 \times 10^5) - (9.5 \times 10^4) \\ (a \times 10^n) - (b \times 10^n) &= (a - b) \times 10^n & (1.2 \times 10^5) - (0.95 \times 10^5) \leftarrow \text{Adjust to get same} \\ & & (1.2 - 0.95) \times 10^5 & \text{exponent.} \\ & & 0.25 \times 10^5 & \leftarrow \text{Not in scientific notation.} \\ & & 2.5 \times 10^4 & \leftarrow \text{Answer} \end{aligned}$$

To multiply numbers written in scientific notation:

Multiply the decimal numbers.

Add the exponents in the powers of 10.

Check whether the answer is in scientific notation.

If it is not, adjust the decimal numbers and the exponent.

$$\begin{aligned} (a \times 10^n) \times (b \times 10^m) &= ab \times 10^{n+m} & (2.7 \times 10^8) \times (8.9 \times 10^4) \\ & & (2.7 \times 8.9) \times 10^{8+4} \\ & & 24.03 \times 10^{12} & \leftarrow \text{Not in scientific notation.} \\ & & 2.403 \times 10^{13} & \leftarrow \text{Answer} \end{aligned}$$

To divide numbers written in scientific notation:

Divide the decimal numbers.

Subtract the exponents in the powers of 10.

Check whether the answer is in scientific notation.

If it is not, adjust the decimal numbers and the exponent.

$$\begin{aligned} (a \times 10^n) \div (b \times 10^m) &= a \div b \times 10^{n-m} & (6.3 \times 10^7) \div (9.0 \times 10^3) \\ & & (6.3 \div 9.0) \times 10^{7-3} \\ & & 0.7 \times 10^4 & \leftarrow \text{Not in scientific notation.} \\ & & 7.0 \times 10^3 & \leftarrow \text{Answer} \end{aligned}$$

**Compute. Write each answer in scientific notation.**

1.  $(2.21 \times 10^7) \div (3.4 \times 10^4)$       2.  $(5.8 \times 10^6) - (4.3 \times 10^6)$       3.  $(2.8 \times 10^3)(7.5 \times 10^4)$



6. Read the sentence.

All volunteers participating in this year's event must attend a mandatory information session.

What is the correct way to rewrite the sentence leaving out the underlined phrase?

- A. All volunteers. Must attend a mandatory information session.
- B. All volunteers . . . participating in this year's event . . . must attend a mandatory information session.
- C. All volunteers.....must attend a mandatory information session.
- D. All volunteers . . . must attend a mandatory information session.

L.8.2.B

7. Which sentence shows the correct spelling of the underlined word?

- A. Carter hasn't been here resently.
- B. Carter hasn't been here recently.
- C. Carter hasn't been here recenttly.
- D. Carter hasn't been here recintly.

L.8.2.C

8. Read the following sentence that includes two examples of passive voice. Then, read the question that follows.

Cookies were baked by the teacher and students before the party was started by the class.

Which two sentences correctly change the two examples of passive voice to active voice?

- A. The class started the party after the teacher and students baked cookies.
- B. The teacher and students baked cookies before the class started the party.
- C. Before the party was started by the class, the cookies were baked by the teacher and students.
- D. Because the cookies were baked by the teacher and students, the class started the party.
- E. When the teacher and students baked the cookies, the party was started by the class.

L.8.3.A

9. What is the correct definition of the underlined word in the sentence below?

The excessive volume of Mark's music made his neighbors very upset.

- A. below what is proper, normal, and necessary
- B. lacking in strength
- C. serving to express a view or opinion
- D. beyond what is proper, normal, and necessary

L.8.4.A

10. The word epidemic comes from the Greek words *epi-*, meaning "among" or "upon," and *demos*, meaning "people" or "district." Based on this information, a disease is considered an epidemic when \_\_\_\_\_.

- A. it is first identified
- B. it is examined scientifically
- C. it is found to be widespread
- D. it is determined to be life-threatening

L.8.4.B

11. Read the following sentences.

The roots prudently answered, "Although you may not distinguish us, we are masked underneath the earth, far far below the leaves; however we nourish the stalk and make you grow. Your impressive beauty is not a result of you alone; you owe your exquisiteness to us.

Now read the dictionary entry for nourish.

Main entry: nourish

- 1. Give food to somebody or something
- 2. support or foster somebody or something
- 3. provide a reward for good behavior
- 4. talk to somebody or something; provide psychological guidance
- 5. beautify somebody or something

Which of these is an accurate definition of nourish as it is used in the text above? Pick two options.

- A. Give food to somebody or something
- B. support or foster somebody or something
- C. provide a reward for good behavior
- D. talk to somebody or something; provide psychological guidance
- E. beautify somebody or something

L.8.4.C



**LESSON**  
**2-4**

**Operations with Scientific Notation**

*Practice and Problem Solving: D*

**Add or subtract. Write your answer in scientific notation. The first one is done for you.**

1.  $2.4 \times 10^2 + 3.3 \times 10^4 + 7.2 \times 10^3$   
 $240 + 33,000 + 7200 = 40,440$   
 $= 4.044 \times 10^4$

2.  $1.2 \times 10^4 - 1.5 \times 10^3 - 2.2 \times 10^2$   
 \_\_\_\_\_  
 \_\_\_\_\_

3.  $7.3 \times 10^5 + 1.6 \times 10^6 + 4.7 \times 10^5$   
 \_\_\_\_\_  
 \_\_\_\_\_

4.  $8.2 \times 10^4 - 2.4 \times 10^4 - 1.5 \times 10^3$   
 \_\_\_\_\_  
 \_\_\_\_\_

**Multiply or divide. Write your answer in scientific notation. The first one is done for you.**

5.  $(3.2 \times 10^3)(6.4 \times 10^9) = (3.2 \times 6.4) \times (10^3 \times 10^9)$   
 $= 20.48 \times 10^{3+9}$   
 $= 20.48 \times 10^{12}$   
 $= 2.048 \times 10^{13}$

6.  $\frac{9.6 \times 10^5}{5 \times 10^4} =$   
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

7.  $(2.5 \times 10^4)(4.1 \times 10^4) =$  \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

8.  $\frac{6.4 \times 10^{10}}{3.2 \times 10^2} =$  \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Write each number using calculator notation. The first one is done for you.**

9.	Scientific notation	$7.1 \times 10^5$		$4.4 \times 10^{-3}$	
10.	Calculator notation	7.1E+5	3.3E-3		6.9E+5

**Answer the questions.**

11. How do you write one million in scientific notation? \_\_\_\_\_

12. A day is  $8.64 \times 10^4$  seconds long. Write and solve an expression to find how many days are in one million seconds. Give your answer in standard form.

\_\_\_\_\_

12. Richard thought that the word questioned meant "to raise objection."

After he read the following text, he discovered that his definition was only correct in certain contexts.

Read the lines from the text.

"So what does that have to do with the hissing sound we're hearing now?" questioned Randolph.

"It is the sound of Agatha and Charles saying that they are sorry and that they love each other," concluded Grandpa Luke.

Which of the following *most* accurately defines questioned as it is used in the text above? Select *two* options.

- A. to ask something
- B. feel or express doubt
- C. finished something
- D. made a logical judgment
- E. reached a goal
- F. wonder

L.8.4.D

13. Read this sentence:

Leaving the house without an umbrella when it's raining cats and dogs outside was definitely not the best idea.

What does the underlined portion of the sentence most nearly mean?

- A. that is it raining heavily outside.
- B. that cats and dogs do not like the rain.
- C. that umbrellas are always needed when it rains.
- D. that it is not a good idea to go out in the rain.

L.8.5.A

14. Read this sentence:

Crocker just nodded despairingly and settled for the duration: By now, he knew that could be quite a stretch.

Which BEST explains how the words stretch and duration are the same or different in meaning?

- A. *Duration* suggests a difficult problem, but stretch suggests an easy one.
- B. *Both* refer to a problem.
- C. *Both* refer to a period of time.
- D. *Duration* suggests a long time, but stretch suggests a short time.

L.8.5.B

**LESSON**  
**2-4**
**Operations with Scientific Notation**
**Practice and Problem Solving: A/B**

**Add or subtract. Write your answer in scientific notation.**

1.  $6.4 \times 10^3 + 1.4 \times 10^4 + 7.5 \times 10^3$

2.  $4.2 \times 10^6 - 1.2 \times 10^5 - 2.5 \times 10^5$

\_\_\_\_\_

\_\_\_\_\_

3.  $3.3 \times 10^9 + 2.6 \times 10^9 + 7.7 \times 10^8$

4.  $8.0 \times 10^4 - 3.4 \times 10^4 - 1.2 \times 10^3$

\_\_\_\_\_

\_\_\_\_\_

**Multiply or divide. Write your answer in scientific notation.**

5.  $(3.2 \times 10^8)(1.3 \times 10^9) =$  \_\_\_\_\_

6.  $\frac{8.8 \times 10^7}{4.4 \times 10^4} =$  \_\_\_\_\_

7.  $(1.5 \times 10^6)(5.9 \times 10^4) =$  \_\_\_\_\_

8.  $\frac{1.44 \times 10^{10}}{2.4 \times 10^2} =$  \_\_\_\_\_

**Write each number using calculator notation.**

9.  $4.1 \times 10^4 =$  \_\_\_\_\_

10.  $9.4 \times 10^{-6} =$  \_\_\_\_\_

**Write each number using scientific notation.**

11.  $5.2E-6 =$  \_\_\_\_\_

12.  $8.3E+2 =$  \_\_\_\_\_

**Use the situation below to complete Exercises 13–16. Express each answer in scientific notation.**

A runner tries to keep a consistent stride length in a marathon. But, the length will change during the race. A runner has a stride length of 5 feet for the first half of the race and a stride length of 4.5 feet for the second half.

13. A marathon is 26 miles 385 yards long. That is about  $1.4 \times 10^5$  feet. How many feet long is half a marathon?

\_\_\_\_\_

14. How many strides would it take to finish the first half of the marathon?

\_\_\_\_\_

15. How many strides would it take to finish the second half of the marathon?

\_\_\_\_\_

16. How many strides would it take the runner to complete marathon?  
Express your answer in both scientific notation and standard notation.

\_\_\_\_\_

*Hint: Write 5 ft as  $5.0 \times 10^0$  and 4.5 feet as  $4.5 \times 10^0$ .*

15. Identify the correct connotation of the word slavish as it is used in the following sentence.

Though she was an excellent athlete, some thought her slavish devotion to her sport was excessive.

- A. loyal
- B. hard-working
- C. pious
- D. ambitious

L.8.5.C

16. Read the paragraph.

After the pain subsided, the patient remained in observation for a period of time. During this time, plenty of tests were conducted to determine the cause of the illness, but none of them clarified the causes of his illness. This appeared as mysteriously as it left.

What does the word *subsided* suggest about the patient's suffering. Select two:

- A. The pain became more intense
- B. The pain became weaker
- C. The pain gradually increased
- D. The pain gradually decreased

L.8.6\*

17. Read the paragraph.

The SWAT team, which stands for "Special Weapons and Tactics Team," is an elite police force created to gain control over dangerous situations involving armed criminals.

Which phrase defines *elite*?

- A. specially dangerous
- B. indigenously resourceful
- C. full of apprehension
- D. specialized and selected

L.8.6\*

18. In which sentence is *invasive* used correctly?

- A. The army became *invasive* when they occupied the neighboring country..
- B. The *invasive* presenter refused to continue speaking.
- C. The woman became *invasive* and left the building.
- D. An *invasive* plant species can take over an area where local species previously thrived.

L.8.6\*

**LESSON**  
**2-4**
**Operations with Scientific Notation**
**Practice and Problem Solving: C**

**Add or subtract. Write your answer in scientific notation.**

1.  $2.4 \times 10^2 + 3.4 \times 10^4 + 1.5 \times 10^3$

\_\_\_\_\_

2.  $6.2 \times 10^4 - 3.4 \times 10^2 - 7.5 \times 10^3$

\_\_\_\_\_

3.  $8.3 \times 10^5 + 1.6 \times 10^7 + 6.7 \times 10^4$

\_\_\_\_\_

4.  $8.0 \times 10^3 - 0.8 \times 10^3 - 1.2 \times 10^2$

\_\_\_\_\_

**Multiply or divide. Write your answer in scientific notation.**

5.  $(5.2 \times 10^8)(4.8 \times 10^4) =$  \_\_\_\_\_

6.  $\frac{9.8 \times 10^7}{1.4 \times 10^{-5}} =$  \_\_\_\_\_

7.  $(8.5 \times 10^2)(3.4 \times 10^{-5}) =$  \_\_\_\_\_

8.  $\frac{1.702 \times 10^5}{7.4 \times 10^8} =$  \_\_\_\_\_

**Use the information below to complete Exercises 9–13.**

A 60-watt light bulb uses 60 watt hours of electricity in 1 hour. Suppose everyone in the United States left one unneeded 60 watt light bulb on for one hour every day for a year.

9. Electricity is billed in kilowatt hours. So 60 watt hours is equal to sixty divided by one thousand. Express the electricity used by a 60-watt light bulb in one hour in kilowatt hours in scientific notation.

\_\_\_\_\_

10. Express the number of days in a year in scientific notation.

\_\_\_\_\_

11. There are about 315,000,000 people in the United States. Write that number in scientific notation.

\_\_\_\_\_

12. Now find how many kilowatt hours of electricity would be wasted if every person in the United States left on one unneeded 60-watt light bulb one hour a day for a whole year. Express your answer in both scientific notation and standard notation.

\_\_\_\_\_

13. The average household uses about 15,000 kilowatt hours per year. How many households could use that wasted electricity from item 12 and have light for a year? Express your answer in standard notation.

\_\_\_\_\_

## Assignment Title: Famous Art Recreation

### Student Instructions

#### Famous Art Recreation

Find a famous painting. Recreate that painting at home, using objects that you have around. You may be in the painting, or even use a pet, your family members, etc.

Upload both the original and your recreation for side by side comparison

Helpful Information: the "layout" app will help you put two images side by side, "Terrible Art Found in Charity Shops" Facebook group has tons of examples of people doing this, a Google search of "Famous Art Recreation Challenge" will give you lots of examples too



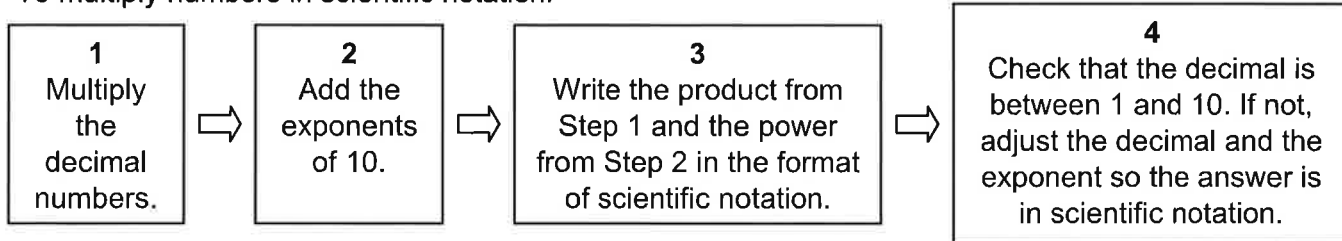
**LESSON**  
**2-4**

# Operations with Scientific Notation

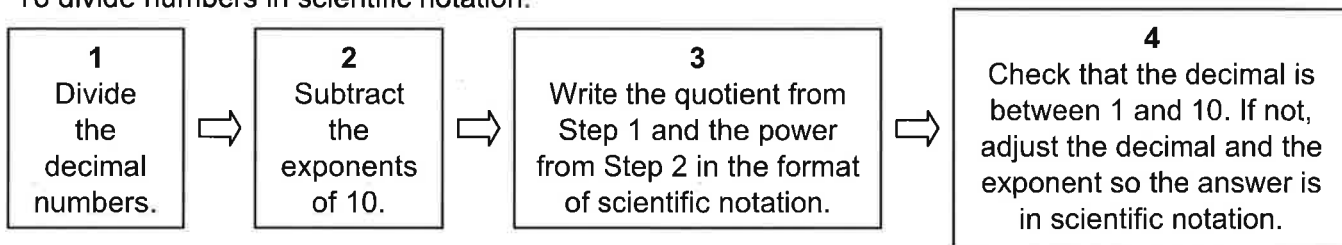
## Reading Strategies: Follow a Flowchart

A flowchart gives you a plan. You can use a flowchart to compute with numbers given in scientific notation.

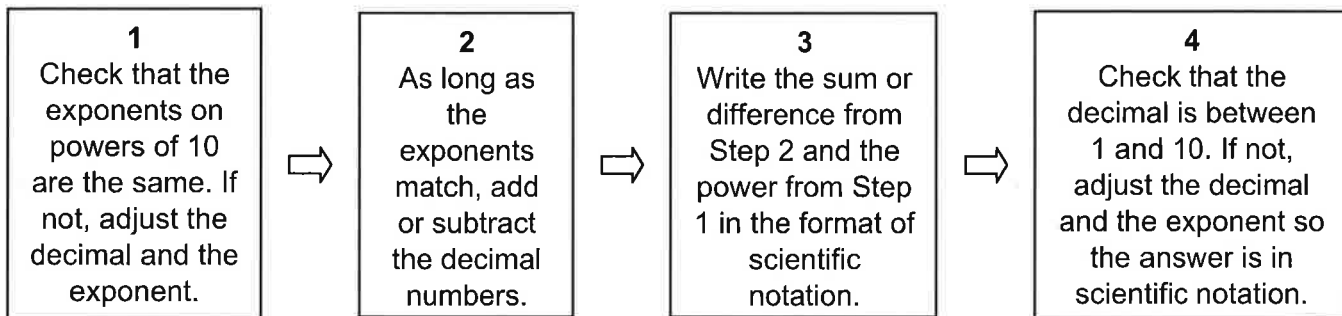
To multiply numbers in scientific notation:



To divide numbers in scientific notation:



To add or subtract numbers in scientific notation:



Identify which flowchart to follow. Perform the indicated operation.

1.  $4.2 \times 10^3 + 2.4 \times 10^4$

2.  $(1.2 \times 10^4)(1.6 \times 10^6)$

3.  $\frac{8.8 \times 10^7}{4.4 \times 10^4}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4.  $(6.4 \times 10^3) \div (3.2 \times 10^4)$

5.  $(3.2 \times 10^8) - (1.3 \times 10^7)$

6.  $(7.0 \times 10^6)(4.7 \times 10^3)$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Lesson 25

## WHAT IS THE ROLE OF PLANTS IN ECOSYSTEMS?

### THE BIG IDEA

- Photosynthesis drives the flow of matter and energy in ecosystems.

#### WORDS TO KNOW

ecosystem  
producer  
consumer  
decomposer  
chlorophyll  
photosynthesis

### WHAT I NEED TO KNOW

Before soccer practice, a student eats an apple for a quick burst of energy. How is an apple responsible for the students' performance in practice?

An ecosystem is a community of organisms and its nonliving environment. Energy and matter flow through an ecosystem in a set pattern. Energy first passes through producers, organisms that are able to produce their own food usually by using energy from sunlight to make sugars.

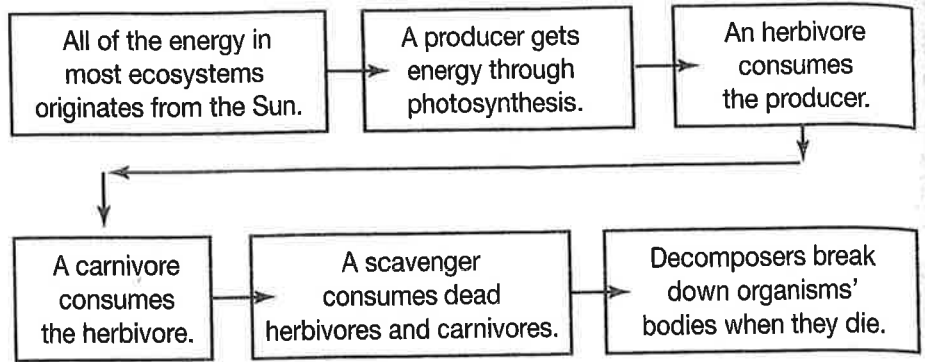
Then energy passes through consumers, organisms that eat other organisms for energy. There are several different types of consumers. Herbivores, such as mice, are consumers that get their energy directly from producers. Herbivores eat only plants. Carnivores get energy from eating other consumers. Hawks and wolves are carnivores. They eat other animals. Omnivores, including human beings, consume both producers and consumers.

Finally, energy passes to decomposers. A decomposer is an organism that gets energy by breaking down the remains of dead organisms or organic wastes and consuming or absorbing nutrients. Most decomposers are bacteria and fungi. Decomposers are important to ecosystems because they recycle nutrients back into the environment. The chemical energy and nutrients that are stored in the bodies of producers and consumers return to the environment when decomposers break down their bodies. If you have ever observed compost forming in a compost bin, you have seen what decomposers can do to once-living things.

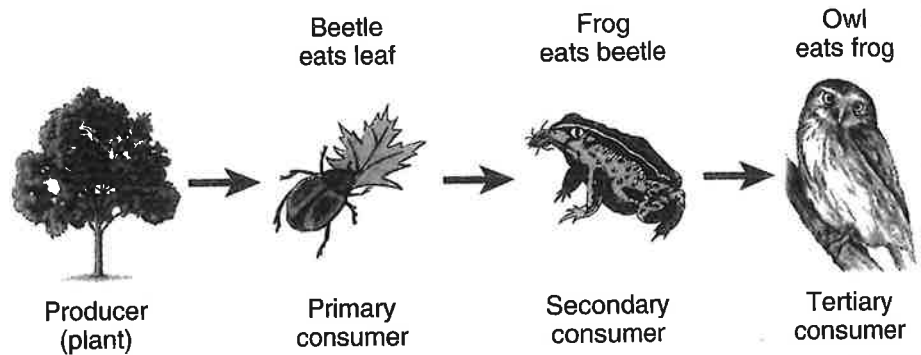
#### THINK ABOUT IT

How do animals and plants get energy?





Energy typically flows through an ecosystem in one direction from producers to consumers to decomposers. This path of the flow of energy through an ecosystem is called a *food chain*. A food chain shows how energy flows from one organism to the next.



### ▶ TURN AND TALK

Why are plants important sources of energy for an ecosystem? How do humans fit into ecosystems?

All food chains begin with producers such as plants, algae, and other microorganisms. This is because producers are the only organisms that can obtain energy from the environment. These organisms have a substance called chlorophyll. Chlorophyll is a green material in plant cells that traps the energy in sunlight. Plant cells need this energy for the process of photosynthesis. Photosynthesis is the process by which plants use the energy in sunlight plus water and carbon dioxide to produce their own food. In this process, producers make sugars that serve as energy for themselves to store for later use. The sugars also serve as food for consumers.

Photosynthesis also results in another very important substance: oxygen. Photosynthetic organisms release oxygen into the air. This process is the main source of oxygen in the atmosphere. Most cells, including those in plants and animals, use oxygen to release the energy stored in food.

from **It Worked  
for Me:**  
In LIFE and LEADERSHIP

from **Colin  
Powell:**  
MILITARY LEADER

Memoir by Colin Powell

Biography by Warren Brown

**Directions:** Use the example provided for the word **“DECISION”** to complete the graphic organizer for the other 3 vocabulary words.

DECISION		OUTCOME	
<b>DEFINITION</b>  A conclusion or resolution reached consideration	<b>SYNONYM</b>  Choice	<b>DEFINITION</b>	<b>SYNONYM</b>
<b>RELATED FORMS</b>  Decide, Decisive	<b>SAMPLE SENTENCE</b>  We need to make a <i>decision</i> about who will present our project to the teacher.	<b>RELATED FORMS</b>	<b>SAMPLE SENTENCE</b>

RESOLVE		SIGNIFICANT	
<b>DEFINITION</b>	<b>SYNONYM</b>	<b>DEFINITION</b>	<b>SYNONYM</b>
<b>RELATED FORMS</b>	<b>SAMPLE SENTENCE</b>	<b>RELATED FORMS</b>	<b>SAMPLE SENTENCE</b>

**DAYS 2 and DAY 3**

**Assignment Title: Decisions That Matter**

**Genre: Narrative Writing (Write about a Personal Experience)**

**Instructions:**

**Write a 3-5 paragraph essay about a decision you made and why it was important. The essay should consist of a short description of a significant decision and an explanation of why the decision mattered. You are to include details in your compositions that express the significance of the decision.**

**Day 2: Pre-Writing**

**STEP 1: COMPLETE THE GRAPHIC ORGANIZER**

What was the decision?	
What words would describe the decision?	
Why was it important?	

**STEP 2: REVIEW THE RUBRIC**





# **CUSD Learning Packet #7**

## **Eighth Grade Answer Key**



## 8th Grade Language Spirals Answer Key

Item #	Spiral 3	Spiral 4	Spiral 5
1		B	A
2		A	D
3		C	D
4		A,E	D
5		D	C
6		B	D
7		D	B
8		C,D	A, B
9		B	D
10		A	C
11		B,E	B, E
12		A,D	A, F
13		D	A
14		D	C
15		C	B
16		A,C	B, D
17		C	D
18		B	D

13.  $7.0 \times 10^4$
14.  $1.4 \times 10^4$
15.  $1.6 \times 10^4$
16. about  $3.0 \times 10^4$ , or about 30,000 strides

### Practice and Problem Solving: C

1.  $3.574 \times 10^4$
2.  $5.416 \times 10^4$
3.  $1.6897 \times 10^7$
4.  $7.08 \times 10^3$
5.  $2.496 \times 10^{13}$
6.  $7.0 \times 10^{12}$
7.  $2.89 \times 10^{-2}$
8.  $2.3 \times 10^{-4}$
9.  $6.0 \times 10^{-2}$
10.  $3.65 \times 10^2$
11.  $3.15 \times 10^8$
12.  $6.8985 \times 10^9$  kilowatt hours;  
6,898,500,000 kilowatt hours
13. 459,900 households

### Practice and Problem Solving: D

1.  $4.044 \times 10^4$
2.  $1.028 \times 10^4$
3.  $2.8 \times 10^6$
4.  $5.65 \times 10^4$
5.  $2.048 \times 10^{13}$
6.  $1.92 \times 10^1$
7.  $1.025 \times 10^9$
8.  $2.0 \times 10^8$
9.  $3.3 \times 10^{-3}$ ,  $6.9 \times 10^5$
10.  $7.1E + 5$ ,  $4.4E - 3$
11.  $1.0 \times 10^6$
12.  $\frac{1.0 \times 10^6}{8.64 \times 10^4} \approx$   
 $0.116 \times 10^2$  or  $1.16$   
 $\times 10^1 \approx 11.6$  days

### Reteach

1.  $6.5 \times 10^2$
2.  $1.5 \times 10^6$
3.  $2.1 \times 10^8$

### Reading Strategies

1.  $2.82 \times 10^4$
2.  $1.92 \times 10^{10}$
3.  $2.0 \times 10^3$
4.  $2.0 \times 10^{-1}$
5.  $3.07 \times 10^8$
6.  $3.29 \times 10^{10}$

### Success for English Learners

1. Sample answer: When dealing with very large or very small numbers
2.  $5.5 \times 10^2$
3.  $1.5 \times 10^6$
4.  $1.45 \times 10^{10}$
5.  $3.74 \times 10^5$
6.  $6.12 \times 10^{11}$
7.  $5.6 \times 10^4$

### MODULE 2 Challenge

1. 9,460,528,400,000,000 m; rounded, this is 9 trillion km
2. 9,460,528,400,000 km;  
 $9.4605284 \times 10^{12}$  km; almost 10 trillion
3.  $(9.4605284 \times 10^{12} \text{ km})(3.26)$ ;  
 $3.08 \times 10^{13}$  km
4. 0.000000001 m;  $1 \times 10^{-9}$  m
5.  $(1 \times 10^{-9} \text{ m})(0.1) = 1 \times 10^{-10}$  m
6.  $(1 \times 10^{-9} \text{ m})(1,000) = 1 \times 10^{-6}$  m
7.  $\frac{3.08 \times 10^{16}}{1.0 \times 10^{-9}} = 3.08 \times 10^{25}$ ; 1 parsec is  
about  $3 \times 10^{25}$  nanometers

**Practice and Problem Solving: D**

1.  $\frac{1}{100}$

2.  $\frac{1}{100,000}$

3.  $\frac{1}{10,000}$

4.  $\frac{1}{1000}$

5.  $\frac{1}{10 \times 10 \times 10 \times 10 \times 10}$

6.  $\frac{1}{10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10}$

7.  $\frac{1}{10 \times 10 \times 10 \times 10}$

8.  $\frac{1}{10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10}$

9.  $\frac{1}{10^3} = 10^{-3}$

10.  $\frac{1}{10^1} = 10^{-1}$

11.  $\frac{1}{10^2} = 10^{-2}$

12.  $\frac{1}{10^4} = 10^{-4}$

13.  $\frac{1}{10}$

14.  $\frac{1}{1000}$

15.  $\frac{1}{10,000}$

16.  $\frac{1}{1,000,000,000}$

17.  $\frac{1}{100,000}$

18.  $\frac{1}{1,000,000,000,000}$

19. -4

20. -1

21. -8

22. -3

23. 0.00356

24. 0.00009

25. 0.0006875

26. 0.000004005

27. 0.15 ft<sup>2</sup>;  $1.5 \times 10^{-1}$

**Reteach**

1.  $2.79 \times 10^{-2}$

2.  $7.1 \times 10^{-5}$

3.  $5.06 \times 10^{-7}$

4. 0.000235

5. 0.0065

6. 0.0000707

**Reading Strategies**

1. 1; 3; right; -3;  $1.23 \times 10^{-3}$

2. 5; 6; right; -6;  $5.67 \times 10^{-6}$

3. -8; left; 8; 0.000000067

4. -4; left; 4; 0.000321

**Success for English Learners**

1.  $5.75 \times 10^{-3} > 5.75 \times 10^{-4}$  because  $5.75 \times 10^{-3} = 0.00575$  and  $5.75 \times 10^{-4} = 0.000575$ .

2. A hair;  $3 \times 10^{-7} = 0.0000003$  g, and a hair would have a mass that is less than a gram, but a bicycle would not.

3.  $4.93 \times 10^{-4}$

4. 0.0000321

**LESSON 2-4****Practice and Problem Solving: A/B**

1.  $2.79 \times 10^4$

2.  $3.83 \times 10^6$

3.  $6.67 \times 10^9$

4.  $4.48 \times 10^4$

5.  $4.16 \times 10^{17}$

6.  $2.0 \times 10^3$

7.  $8.85 \times 10^{10}$

8.  $6.0 \times 10^7$

9.  $4.1E + 4$

10.  $9.4E - 6$

11.  $5.2 \times 10^{-6}$

12.  $8.3 \times 10^2$



**Directions:** Use the example provided for the word “**DECISION**” to complete the graphic organizer for the other 3 vocabulary words.

<b>DECISION</b>		<b>OUTCOME</b>	
<b>DEFINITION</b> <i>A conclusion or resolution reached consideration</i>	<b>SYNONYM</b> <i>Choice</i>	<b>DEFINITION</b> ANSWERS WILL VARY	<b>SYNONYM</b> ANSWERS WILL VARY
<b>RELATED FORMS</b> <i>Decide, Decisive</i>	<b>SAMPLE SENTENCE</b> <i>We need to make a decision about who will present our project to the teacher.</i>	<b>RELATED FORMS</b> ANSWERS WILL VARY	<b>SAMPLE SENTENCE</b> ANSWERS WILL VARY

<b>RESOLVE</b>		<b>SIGNIFICANT</b>	
<b>DEFINITION</b> ANSWERS WILL VARY	<b>SYNONYM</b> ANSWERS WILL VARY	<b>DEFINITION</b> ANSWERS WILL VARY	<b>SYNONYM</b> ANSWERS WILL VARY
<b>RELATED FORMS</b> ANSWERS WILL VARY	<b>SAMPLE SENTENCE</b> ANSWERS WILL VARY	<b>RELATED FORMS</b> ANSWERS WILL VARY	<b>SAMPLE SENTENCE</b> ANSWERS WILL VARY

## WRITING Write About an Experience

In this task type, students write about a familiar topic, such as a memorable classroom activity or event, based on their own personal experience.

Aligned 2012 ELD Standards: PI.C.10, PII.B.3, PII.B.4, PII.B.5, PII.C.6

### Rubric

Score	Descriptors
<b>4</b>	<ul style="list-style-type: none"> <li>• The response provides a description of the experience named in the prompt using well-developed descriptions, details, and/or examples.</li> <li>• The response is readily coherent.</li> <li>• Grammar and word choice are varied and generally effective. Minor errors do not impede meaning.</li> <li>• Minor errors in spelling and punctuation may be present, but they do not impede meaning.</li> <li>• The response includes a paragraph of at least three sentences.</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>• The response provides a description of an experience relevant to the prompt using some descriptions, details, or examples.</li> <li>• The response is generally coherent.</li> <li>• Errors and limitations in grammar and word choice may impede meaning in some sentences.</li> <li>• Errors in spelling and punctuation may impede meaning at times.</li> <li>• The response includes at least two sentences.</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>• The response provides a description of an experience relevant to the prompt using some descriptions, details, or examples, but is not complete.</li> <li>• The response is somewhat coherent.</li> <li>• Errors and limitations in grammar and word choice impede the overall meaning.</li> <li>• Errors in spelling and punctuation frequently impede meaning.</li> <li>• The response includes at least one sentence.</li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li>• The response may provide a limited description of the experience named in the prompt and/or conveys little relevant information.</li> <li>• The response lacks coherence. It may consist of isolated words or phrases.</li> <li>• Frequent errors and/or severe limitations in grammar and word choice prevent expression of ideas.</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Response contains no English, does not relate to the prompt, or includes only "I don't know."</li> </ul>